05-GF-113
(6700)

Water Works and Lighting Commission
221 16th St. So. P.O. Box 399 Wisconsin Rapids, WI 54495-0399 715/423-6300 FAX: 715/423-2831

January 9, 2003

Mr. Scot Cullen, Chief Electric Engineer
Public Service Commission
610 N. Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

RE: In the Matter of Filing Reporting Requirements for Appropriate Inspection and Maintenance, PSC Rule 113.0607(6)

Dear Mr. Cullen:

Enclosed for filing are 3 copies of Wisconsin Rapids Water Works and Lighting Commission's report to the Wisconsin Public Service Commission, submitted every two years, showing compliance with its Preventative Maintenance Plan.

Sincerely,

Greg McTavish

Greg McTavish
Electrical Engineer

Enclosures

TWO YEAR REPORT DOCUMENTING COMPLIANCE WITH THE PREVENTATIVE MAINTENANCE PLAN

Wisconsin Rapids Water Works and Lighting Commission

FILING DEADLINE
FEBRUARY 1, 2003

January 9, 2003

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This report format was prepared by the MEUW work group for PSC Rule 113.0607 for use by the 82 municipal electric utilities in Wisconsin and endorsed by PSC staff as meeting the requirements of Rule PSC 113.0607.

I Reporting Requirements: PSC 113.0607(6) states;

Each utility shall provide a periodic report to the commission showing compliance with its Preventative Maintenance Plan. The report shall include a list of inspected circuits and facilities, the condition of facilities according to established rating criteria, schedules established and success at meeting the established schedules.

II Inspection Schedule and Methods:

SCHEDULE:	MONTHLY	ANNUAL	EVERY 5 YEARS
Transmission (≥69Kv)		X	X
Substations	X	X	
Distribution (OH & UG)			X

METHODS: Five criteria groups will be used to complete the inspection of all facilities.

1. IR – infrared thermography used to find poor electrical connections and/or oil flow problems in equipment.
2. RFI - Radio Frequency Interference, a byproduct of loose hardware and connections, is checked using an AM radio receiver.
3. SI – structural integrity of all supporting hardware including poles, crossarms, insulators, structures, bases, foundations, buildings, etc.
4. Clearance – refers to proper spacing of conductors from other objects, trees and conductors.
5. EC – equipment condition on non-structural components such as circuit breakers, transformers, regulators, reclosers, relays, batteries, capacitors, etc.

Distribution facilities will be inspected by substation circuits on a 5 year cycle such that the entire system will be inspected every 5 years. Inspector instructions for inspecting all facilities and forms are included in the plan.

III Condition Rating Criteria

This criterion, as listed below, establishes the condition of a facility and also determines the repair schedule to correct deficiencies .

0) Good condition
1) Good condition but aging
2) Non-critical maintenance required – normally repair within 12 months
3) Priority maintenance required – normally repair within 90 days
4) Urgent maintenance required – report immediately to the utility and repair normally within 1 week

IV Corrective Action Schedule

The rating criteria as listed above determine the corrective action schedule.

V Record Keeping

All inspection forms and records will be retained for a minimum of 10 years. The inspection form contains all of the required critical information i.e. inspection dates, condition rating, schedule for repair and date of repair completion.

VI Reporting Requirements

A report and summary of this plan's progress will be submitted every two years with the first report due to the Commission by February 1, 2003. The report will consist of a cover letter documenting the percent of inspections achieved compared to the schedule and the percent of maintenance achieved within the scheduled time allowance.

VII Inspected Circuits and Facilities

Circuit # and description	Substation

Base load and peaking generation, less than 50 megawatts per unit in size, is typically subject to pre-operational checks, in addition to checks and maintenance during and after periods of operation. Emergency generation is test run and maintained every two weeks to confirm its operational readiness. Wisconsin Rapids Water Works and Lighting Commission has a 250kW generator that is used for back up power for the office/plant of Wisconsin Rapids Water Works and Lighting Commission.

VIII Scheduling Goals Established and Success of Meeting the Criteria:

Wisconsin Rapids Water Works and Lighting Commission goal was monthly inspections of the substations, annual subtransmission line inspections and to inspect 40% of the distribution system. In addition, we

expected to complete all scheduled maintenance resulting from the inspections within the prescribed time periods specified in the rating criteria.

All of the inspection goals were met or exceeded. Roughly 40% of the distribution system was inspected. The inspections are being done by linemen who are on restricted duty do to workman comp injuries and are restricted to light duty.

IX Facility condition – rating criteria:

During the past two years, 40% of the distribution system was inspected and all substation inspections were completed on time. Of the items found requiring maintenance, all were repaired before they were responsible for an outage to customers. The 50+ year old 2400 volt Market Street Substation will be taken out of commission by the end of 2003 having been converted to 13.2kV by then. In addition Wisconsin Rapids Water Works and Lighting Commission has been upgrading the 5 13.2kV distribution Substations (two new 10MVA substation transformers, replacing old mechanical relays with SEL 351S relays, and new controls for the voltage regulators) and we are also working at converting the 2400 volts delta system to 13.2kV.